



Alpha Magnetic  
Spectrometer NASA / DOE

# *Open Paper Management Tool* *Open Items Report*



National Aeronautics and  
Space Administration

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*Friday, June 08, 2007*

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## *Open Action Items Report*

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**Open Item Number:** 05-042

**RID Open Date:** 9/14/2005

**Title:** Helium Venting Hazard Analysis

**Initiator(s):**

**Description:** Provide hazard analysis for venting of helium from the main tank.

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### *Action Item Information*

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**Actionee(s):** Chris Tutt/ESCG

**Action Due Date:** 4/1/2007

**Action:** Take existing hazard analysis of helium venting presented to NASA and create stand-alone report for delivery to ESTEC.

**Action Status:** 11/20/06 - Date rolled to April 1st to better reflect need. Meeting at ESTEC planned for late April.  
8/14/06 - Date rolled to September 1st.  
6/5/06 - Necessary information received from SCL. In-work, C. Tutt.  
3/30/2006 - Date changed again as analyst is not becoming any faster.  
3/6/2006 - Date changed to 4/1 to account for slothful analyst.  
11/14/2006 - Date changed to 3/1 to better reflect analyst workloads.

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## *Open Action Items Report*

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**Open Item Number:** 05-043

**RID Open Date:** 9/14/2005

**Title:** Helium Venting Hazard Analysis

**Intiator(s):**

**Description:** Provide hazard analysis for venting of helium from the main tank.

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### *Action Item Information*

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**Actionee(s):** Gaetan Piret/ESTEC

**Action Due Date:** 5/1/2007

**Action:** Upon delivery of hazard analysis described in 05-042, evaluate potential hazards to EMI and TV test chambers.

**Action Status:** 11/20/06 - Date rolled to May 1st to roll with 05-042.

8/14/06 - Date rolled to October 1st.

4/10/06 - Due date changed to 6/1/06 allow time after completion of 05-042.

11/12/2005 - Date changed to 4/1/2006 to match item 05-042.

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## *Open Action Items Report*

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**Open Item Number:** 05-074

**RID Open Date:** 10/28/2005

**Title:** CGSE Support at Pad

**Intiator(s):** Trent Martin

**Description:** *It is not clear how the cryogenic GSE, particularly the piping, will be supported at the pad.*

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### *Action Item Information*

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**Actionee(s):** Robert Becker/MIT, Alexander Gretchko/MIT

**Action Due Date:** 6/1/2007

**Action:** *Provide details on how the GSE will be supported at the pad.*

**Action Status:** *6/4/2007 - Ken Bollweg and Mike Capell to work with Alexander Grechko to resolve file transfer problems.*

*2/5/2007 - Date rolled to 6/1/07.*

*11/27/06 - J. Keiffenheim reports that space is available for hanging plumbing, and KSC can design, manufacture hanging hardware. Still have concerns regarding fill port plumbing suspension, so will keep open.*

*10/16/06 - Date rolled to 11/15 after Cryo GSE meeting at KSC.*

*6/26/2006 - Date rolled to October 15th after Magnet Processing meeting at KSC.*

*5/15/2006 - Further discussion on handling of CGSE after PLBD close prelaunch is required.*

*3/24/2006 - Trent Martin to forward all data provided by KSC to Art Nelson for inclusion in ground safety package.*

*2/14/2006 - Alexander Gretchko waiting on information from KSC - Trent Martin to coordinate.*

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## *Open Action Items Report*

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**Open Item Number:** 05-105

**RID Open Date:** 2/23/2007

**Title:** Autoignition Safety Hazard

**Initiator(s):** C. Tutt

**Description:** CGS LTA thermal analysis should contain information to close autoignition safety hazard.

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### *Action Item Information*

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**Actionee(s):** C. Clark

**Action Due Date:** 2/26/2007

**Action:** Review CGS LTA thermal analysis to determine if sufficient data to close the autoignition safety hazard.

**Action Status:** 4/5/2007 - More details needed on baroswitch electronics. Tim Urban to work with Volker Commichau and Mike Capell.

3/26/2007 - Autoignition temperatures do not seem to be a problem, but Craig Clark and Tim Urban working to clarify what parts of CAB will be powered during ascent.

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## *Open Action Items Report*

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***Open Item Number:*** 05-110

***RID Open Date:*** 5/4/2007

***Title:*** Thermal-related actions

***Initiator(s):*** Chris Tutt

***Description:*** Ensure that TCS/TTCS actions are transferreed from the OPMT to the thermal action lists.

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### *Action Item Information*

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***Actionee(s):*** Craig Clark

***Action Due Date:*** 6/1/2007

***Action:*** 1) Confirm that TCS actions closed here have been opened in Joe Burger's list and are being worked at the TWG telecons.  
2) Confirm that TTCS actions closed here have been opened in Elisa Laudi's list and are being worked at the TTCS telecons and statused at the TWG telecons.

***Action Status:***

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## *Open Action Items Report*

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***Open Item Number:*** 05-111

***RID Open Date:*** 5/4/2007

***Title:*** Integration/Magnet actions

***Intiator(s):*** Chris Tutt

***Description:*** Ensure that integration and magnet actions closed in the OPMT are transferred to the integration action item list.

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### *Action Item Information*

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***Actionee(s):*** John Heilig

***Action Due Date:*** 6/1/2007

***Action:*** Confirm that integration/magnet actions closed here are opened and worked in the integration telecon.

***Action Status:***

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## *Open Action Items Report*

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***Open Item Number:*** 07-001

***RID Open Date:*** 6/5/2007

***Title:*** JSC-Built Blanket Grounding Measurements

***Intiator(s):*** Chris Tutt

***Description:*** Need to get grounding measurements for blankets built at JSC.

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### *Action Item Information*

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***Actionee(s):*** Chris Tutt

***Action Due Date:*** 6/15/2007

***Action:*** Chris Tutt to work with Terry Wille to determine where this information is recorded and ensure that safety verification is closed.

***Action Status:***



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## *Open Action Items Report*

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*Open Item Number:* 07-002

*RID Open Date:*

*Title:*

*Initiator(s):* Chris Tutt

*Description:* Safety analysis requires assessing all hardware for venting loads.

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### *Action Item Information*

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*Actionee(s):* Chris Tutt

*Action Due Date:* 7/1/2007

*Action:* Collect venting data for all items and write cover memo suitable for closing safety verification.

*Action Status:*

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## Open Action Items Report

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**Open Item Number:** AMS\_02-CDR-06

**RID Open Date:** 5/1/2003

**Title:** AMS-CDR-1-17: Meteoroid/Orbital Debris Shielding

**Intiator(s):** E. Christiansen/NASA

**Description:** *Shielding from meteoroid/debris impact is inadequate to meet protection requirements. Shielding of pressurized vessels on AMS-02 such as the vacuum case and TRD (as well as any other pressure vessel) is required to prevent catastrophic rupture of these tanks in the event of meteoroid/debris impact which would release high-velocity fragments creating a potentially serious safety issue for on-board crew. The assessed probability of no penetration (PNP) using specified environment models is 0.97 which is far below the specified 0.997 PNP requirement. Updating ballistic limit equations and models as described in the forward work plan does not appear adequate to show compliance with requirements. Additional or significantly enhanced shielding will likely be necessary to meet safety requirements.*

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### Action Item Information

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**Actionee(s):** Dana Lear/ESCG

**Action Due Date:** 8/15/2006

**Action:** *Complete analysis and coordinate design of debris shields. To be completed by Phase III Safety.*

**Action Status:** *6/7/2007 - Dana Lear to train APO personnel on how to run BUMPER - candidate being identified.  
6/4/2007 - Chris Tutt and Trent Martin to meet with Eric Christiansen and Dana Lear on Thursday to discuss plan forward. Mike Capell to send details on which electronics crates should be included in future assessments.  
12/18/06 - W. Minter returning within a few weeks. D. Lear has updated model and work should resume shortly.  
10/16/06 - Trent pressed Eric Christiansen - action to Ross to work with D. Lear to update model.  
6/26/2006 - R. Harold to work with Will Minter on model updates. Will is available until end of August.  
05/03/05 - The AMS-02 modeling for the MMOD assessment was completed last week. Additionally, the BUMPER geometry runs have been completed. Dana Lear verifying/updating all inputs for both the shield ballistic response definitions (BLEs) and the mission parameters.*

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## *Open Action Items Report*

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**Open Item Number:** AMS\_02-PDS\_CDR-06

**RID Open Date:** 4/18/2005

**Title:**

**Initiator(s):** Tim Urban

**Description:**

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### *Action Item Information*

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**Actionee(s):** Marco Molina

**Action Due Date:** 12/1/2007

**Action:** Re-evaluate thermal optical properties on the top of the PDS as there are no longer heaters located there (breakdown of MLI vs. white paint). QM & FM different ?

**Action Status:** 3/26/2007 - Work has restarted - ECD on this question 4/15.  
2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.  
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.  
7/7/06 - Investigate contract status at July TIM.  
5/08/2006 - Contract to be in place by June; roll date to 7/1/06  
4/10/06 - On-hold pending resolution of ETH/CGS contract.  
8/2/2005 - Awaiting thermal analysis of revised worst hot case.

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## *Open Action Items Report*

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**Open Item Number:** AMS\_02-PDS\_CDR-08

**RID Open Date:** 4/18/2005

**Title:**

**Intiator(s):** Tim Urban

**Description:**

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### *Action Item Information*

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**Actionee(s):** S. Alia

**Action Due Date:** 12/1/2007

**Action:** Add 0.03  $\mu$ F per 3.2.2.2.2.A of SSP 57003, and add verification by design inspection or test.

**Action Status:** 3/26/2007 - Updated reports to be released at PDS MRR in December.  
2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.  
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.  
5/08/2006 - Contract to be in place by June; roll date to 7/1/06  
4/10/06 - On-hold pending resolution of ETH/CGS contract.  
11/7/2005 - All further PDS activities on hold until 6 Feb 2006.  
8/22/2005 - CGS proposes release of updated document by 9/19.  
8/15/2005 - Tim Urban to contact Sergio Alia and resolve remaining concerns. Closure expected by 9/5.

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## *Open Action Items Report*

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**Open Item Number:** AMS\_02-PDS\_CDR-09-2

**RID Open Date:** 4/18/2005

**Title:**

**Initiator(s):** Tim Urban

**Description:**

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### *Action Item Information*

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**Actionee(s):** S. Alia

**Action Due Date:** 12/1/2007

**Action:** Update document for maximum operating temperature of 51°C (Section 3.2, requirement ID PDS-ENV-3).

**Action Status:** 2/5/2007 - ASI budget approved; some movement on contract. Dates rolled to 3/5/07.  
8/28/06 - Contract still in work. Work-around by using EM for initial testing. Roll date to 10/5.  
5/08/2006 - Contract to be in place by June; roll date to 7/1/06  
4/10/06 - On-hold pending resolution of ETH/CGS contract.  
11/7/2005 - All further PDS activities on hold until 6 Feb 2006.  
8/22/2005 - CGS proposes release of updated document by 9/19.  
8/2/2005 - MOT should be changed to match updated worst case hot temperature.